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09/668,292	09/25/2000	Andreas Meyer	32238W020	1281

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EXAMINER

MAKI, STEVEN D

ART UNIT

PAPER NUMBER

1733

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12

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/668,292	MEYER ET AL.
Examiner	Art Unit	
Steven D. Maki	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 November 2002.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 8-14 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 8-14 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892) 4) Interview Summary (PTO-413) Paper No(s). _____ .

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) Notice of Informal Patent Application (PTO-152)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) 11. 6) Other: _____ .

1) The disclosure is objected to because of the following informalities:

- on page 3 line 18, "0.05 TR₁" should be --0.95 TR₁-- (see page 8 lines 12-15, original claim 1 and abstract).
- on page 4, lines 16-18 should be deleted since the subject matter of "015 < TRA < 0.05 TR₁ is inadequately described (the units for "015" not being described) and no longer claimed (original claim 2 has been cancelled and no new claim corresponding to claim 2 has been added).
- on page 8, --(a fourth radius)-- should be inserted after "shoulder radius SR" (see page 3 and figure 1 of original disclosure).

Appropriate correction is required.

2) The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claims 8-14 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

In claim 8, the subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention (i.e. the new matter) is the subject matter of "for the case TR₂ \leq TRA, the size of the radius TR₂ is determined according to equation 0.6 TR₁ \leq TR₂ \leq 0.95 TRA". The original disclosure

described using the equation $0.6 \text{ TR}_1 \leq \text{TR}_2 \leq 0.95 \text{ TRA}$ for the case $\text{TR}_2 > \text{TRA}$ instead of for the case where $\text{TR}_2 \leq \text{TRA}$. See specification page 4 lines 19-21, page 8 lines 12-15 and last four lines of abstract.

4) The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5) Claims 8-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 8 line 6, "record radius" should be --second radius--.

In claim 8, it is unclear if the fourth radius and the shoulder radius are the same radius or different radii. In claim 8 lines 9-10, it is suggested to change "a fourth radius, a shoulder radius" to --a fourth radius, wherein the fourth radius is a shoulder radius--. This proposed change would make it clear that the fourth radius and the shoulder radius are the same and that the tread has at least four radii instead of at least five radii.

In claim 10 line 1, "the radius TR" should be --the radius TR_1 --.

6) The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless —

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7) Claims 8-14 are rejected under 35 U.S.C. 102(e) as being anticipated by Iwasaki et al (US 6073668).

See figure 14. Claim 8 fails to exclude using more than four radii.

8) The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9) Claims 8-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan '802 (JP 4-87802) in view of Tokutake (US 5117886) and optionally Iwasaki et al (US 6073668).

Japan '802 discloses a pneumatic radial tire having a tread defined by three radii including a first radius RC for a central region SC, a second radius RM for an intermediate region SM and a third radius RO for an outer region SO. The tire has a (ground contacting) tread width WT. Radius RC corresponds to claimed radius TR₁. Radius RC is 3.1-3.4 times tread width WT. Radius RM corresponds to claimed radius TR₂. Radius RM is 2.2-2.5 times tread width WT. Radius RO corresponds to claimed radius TRA. Radius RO is 0.2-0.28 times tread width WT. Japan '802 teaches that stability and durability of the tire is improved during high speed running. In example 1, the tire has a size if 275/65R15. Hence, the tire has a low aspect ratio of 65%. In example 1, radius RC is 700 mm, radius RM is 500 mm and radius RO is 50 mm.

Japan '802 does not recite using a fourth radius. However, it would have been obvious to one of ordinary skill in the art to contour the tread of Japan '802 such that it is

Art Unit: 1733

a four radii tread instead of a three radii tread wherein each tread edge is defined by the fourth radius since (1) Tokutake, also directed to a low aspect ratio tire for high speed use, suggests improving ground contact performance by contouring a tire tread of such a tire using three or more (preferably four or more) different radii and optionally since (2) Iwasaki et al, also directed to a low aspect ratio tire for high speed use, suggests defining an outer contour of an inflated tire using multiple radii to even ground pressure distribution to improve wear resistance and running performance. *The motivation to use four radii instead of three radii in the tire of Japan '802 is improvement of ground contact performance / even ground pressure distribution.*

The limitation of the **third radius** TRA being 5-65% of the **first radius** TR₁ would have been obvious in view of Japan '802's teaching to define the outer region SO with a third radius RO and to define the center region SC of the tread with a first radius RC such that the **third radius** RO is 6-9% ($0.2 / 3.4 - .28/3.1 \times 100\%$) of the **first radius** RC to improve running stability and durability during high speed running.

The limitation of the **second radius** TR₂ being 10-95% / 60-95% of the **first radius** TR₁ would have been obvious in view of Japan '802's teaching to define the intermediate region SM with a second radius RM and to define the center region SC of the tread with a first radius RC such that the **second radius** RM is 65-81% ($2.2/3.4 - 2.5/3.1 \times 100\%$) of the first the **first radius** RC to improve running stability and durability during high speed running.

As to the contour being defined when the tire is mounted and inflated, Japan '802 teaches this subject matter in light of (a) Japan '802's teaching that the ratio of cross

Art Unit: 1733

sectional height H1 to maximum section width WA is .55-.70 with an inflated radial tire 1 (this information obtained during a partial oral translation of Japan '802) and (b) figure 1 which shows H1, WA, RC, RM and RO for a tire 1 mounted on a rim.

As to claims 9 and 10, the limitations of the **first radius** TR_1 being 3-25 times tread width TW (claim 9) or 3-6 times tread width TW (claim 10) would have been obvious in view of Japan '802's teaching that **first radius** RC is 3.1-3.4 times tread width WT.

As to claim 11, the limitation of the area for **first radius** TR_1 being 10-70% tread width TW would have been obvious in view of Japan '802's teaching to use **first radius** RC to define center section SC which has a width of 35% of tread width WT.

As to claim 12, the limitation of the area for **second radius** TR_2 being 15-90% of tread width TW would have been obvious in view of Japan '802's teaching to use **second radius** RM to define intermediate regions RM wherein the axially outer points of the intermediate regions define a distance of 80% of tread width WT.

As to claims 13 and 14, the limitations therein regarding the location of the transition to the shoulder radius (fourth radius) would have been obvious in view of Tokutake's teaching to locate a fourth radius at a small outmost region 26d of a tread in order to improve the tire ground contact performance.

Remarks

- 10) Applicant's arguments with respect to claims 8-14 have been considered but are moot in view of the new ground(s) of rejection.
- 11) No claim is allowed.

12) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven D. Maki whose telephone number is 703-308-2068. The examiner can normally be reached on Mon. - Fri. 7:30 AM - 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Steven D. Maki
February 28, 2003


2-28-03
STEVEN D. MAKI
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